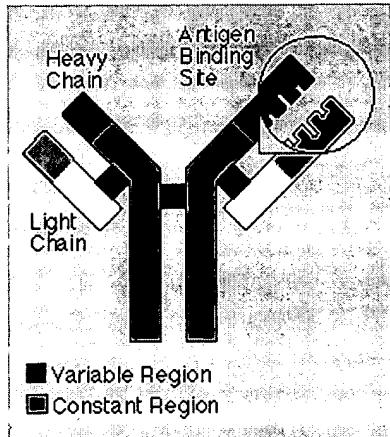


National Cancer Institute

back | index | next

# Science Behind the News

## Understanding The Immune System



### Antibody

Each antibody is made up of two identical heavy chains and two identical light chains, shaped to form a Y.

The sections that make up the tips of the Y's arms vary greatly from one antibody to another; this is called the variable region. It is these unique contours in the antigen-binding site that allow the antibody to recognize a matching antigen, much as a lock matches a key.

The stem of the Y links the antibody to other participants in the immune defenses. This area is identical in all antibodies of the same class—for instance, all IgEs—and it's called the constant region.

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